

Milk and cottage cheese sample preparation*

Acid	Add about 2% cultured buttermilk** -lactic acid about .1-1%
Bitter	Add a few drops of a 1% solution (or .02 g/qt) of quinine sulfate
Coarse	To simulate the course (excessive diacetyl) flavor of cottage cheese; add about .01% diacetyl
Cooked	Heat milk to about 75 deg C (167 F). Cool immediately
Feed	Bubble-steam volatile extract of silage or chopped forages through milk
Flat/Watery	Add 5-10% water
Foreign/Disinfectant	Add hypochlorite sanitizer or laundry bleach (flavor dissipates with time)
Fruity/Fermented	Add pineapple juice and vinegar (6:1) or select from samples held at 5-7 deg for several days.
Garlic/Onion	Add garlic powder, onion juice or macerated sections of onion
Malty	Add malt extract or soak 2 tsp of Grapenuts cereal in 1 pt. milk for 2 hours then filter
Metallic/Oxidized	Add 2 drops of 1% cupric sulfate to 1 pt milk and expose in direct sunlight for 15-30 minutes, or add 10 drops copper sulfate (1 percent) to 1 pt milk and store at 5 deg C for 48 hours. Different flavors will be developed by the different methods.
Musty	Store cottage cheese (or butter) in a small container along with an agar slant culture of <i>Streptomyces odorifer</i>
Rancid	Add 1 part raw milk to 9 parts warm homogenized milk and refrigerate overnight. Or add 2 drops butyric acid per pt.
Salty	Add .5 g table salt/pt
Unclean	Select from several samples of milk stored at 5-7 deg C for several days. Typical samples will have somewhat putrid odor and slightly astringent to bitter flavor. Dilute as necessary.
Yeasty	Add bakers yeast to cream and hold at room temperature overnight, then add to dry cottage cheese or mix with milk.

- *Each substance should be added to high-quality milk unless otherwise noted.
- **The diacetyl present in most cultured buttermilk may confuse the inexperienced analyst.

Courtesy of Dr. Scott Rankin, University of Wisconsin-Madison